Citizen's Advisory Committee Meeting
Galveston Texas November 5, 2003

Action Plan
for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico

Photo: Louisiana Office of Tourism

HYPOXIA

Where we are…

Where we are going…

by
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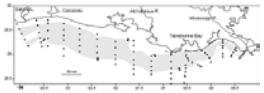
GMPO

Action Plan
for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico

Photo: Louisiana Office of Tourism

Objective 4: By the year 2015 support national efforts to reduce the 5-year running average areal extent of Gulf hypoxia to less than 1,930 square miles.



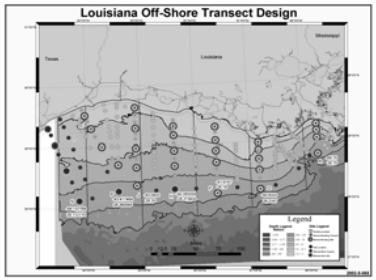
FY2003 – Collaborative (ORD-GED, OW, & GMPO) Initiation of the Gulf Hypoxia Modeling and Monitoring Framework

Background Monitoring Surveys:

Completed:
- **December 2002**
- **March 2003**
- **June 2003**

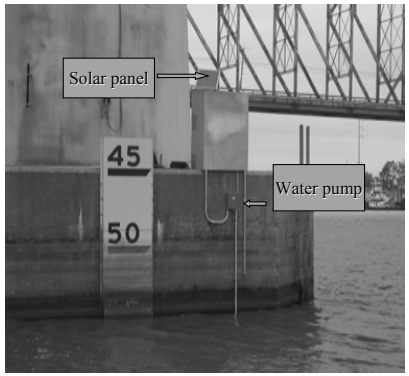
Scheduled:
- **November 5 – 19, 2003**

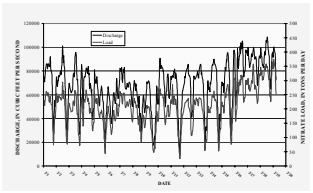
Anticipated
- **March/April 2004**
- **June/July 2004**
- **October/November 2004**



GW.NE.03

Real-time Nitrate Concentrations and Loads in the Lower Atchafalaya River





Predict the size of the hypoxic zone in the Gulf

Assess efforts to reduce nutrient flux to the Gulf

Nitrate Analyzer Installation, 11/02

USGS

2

By Summer 2001, States and Tribes in the Basin, in consultation with the Task Force, will establish sub-basin committees to coordinate implementation of the Action Plan by major sub-basins, including coordination among smaller watersheds, Tribes, and States in each of those sub-basins;

Lower Mississippi River Sub-basin

- **LA Governor's Office Form Lower MS Sub-basin Team**
  1st meeting Feb 10,2003
  2nd meeting Aug. 6, 2003
- **Louisiana Governor's Office – Request GMPO to Facilitate Sub-basin Team Development**
- **GMPO Acceptance to Facilitate Sub-basin Team Formation (November 26, 2002)**

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By Fall 2002, States, Tribes, and Federal agencies within the Mississippi and Atchafalaya River Basin, using available data and tools, local partnerships, and coordination through sub-basin committees, described in action #2, will develop strategies for nutrient reduction. These strategies will include setting reduction targets for nitrogen losses to surface waters, establishing a baseline of Existing efforts for nutrient management, identifying opportunities to restore floodplain wetlands (including restoration of river inflows) along and adjacent to the Mississippi River, detailing needs for additional assistance to meet their goals, and promoting additional funding;

The Action Plan calls for:

- **The formation of sub-basin committees**
- **Coordination of implementation actions**
- **Development of strategies for nutrient reduction**

Lower Mississippi River Sub-Basin Committee

Participating States:
AR, LA, MS, TN, MO

- **Focus and maximize resources**
- **Support local scientific solutions**

Goal: Select a Site and BMP for N Load Reduction Where Environmental Response Can Be Quantified

Site Selection Status:

Louisiana: **Cabin Teele**
Joe's Bayou
Arkansas: **Bayou Bartholomew**
Mississippi: **Lake Washington**
Missouri: **choosing 1 of 5**
Tennessee: **Hatchie River Watershed**

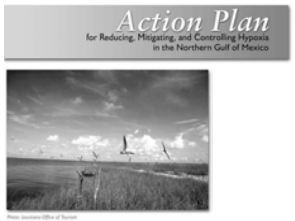
The Strategic Assessment Process

- Selection of priority watershed
- ↓
- Identification of nitrogen source category(s)
- ↓
- Selection of applicable BMP(s)
- ↓
- Selection of demonstration site(s)

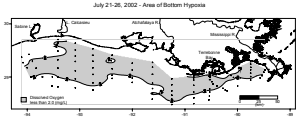
Continuing efforts

- **Work within the pilot Watershed Projects**
- **Include "indicators of success"**
- **Transfer successful actions to other sub-basins**

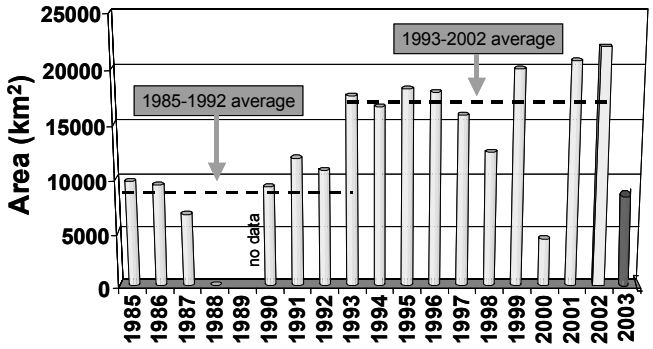
APG 4(B)(2): Support the *Action Plan* to reduce nutrient and sediment loads to the Mississippi/Atchafalaya Rivers



January 2001

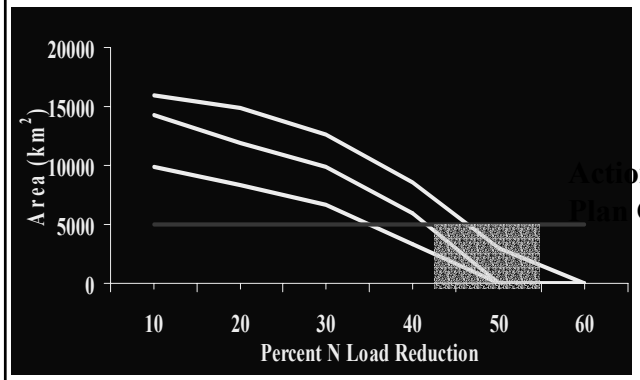


Areal Extent of Hypoxic Zone 1985 - 2003



(source: N. Rabalais, LUMCON)

Effects of Reduced N Loads



35 - 45% N Load Reduction May Be Required to Reach Action Plan Goal of 5,000 km²

Scavia et al. 2003

Nutrient Farming

Using restored wetlands as "nitrogen farms"

The Wetlands Initiative Workshop

Produce nitrogen farm pilot projects

Provide information to assess economic feasibility

- **Site location and selection**
- **Engineering Design and Management**
- **Ecological design and management**
- **Economics**

Nutrient Farming

Strategy to improve water quality

- **remove excess nutrients from surface waters**
- **sell or trade credits**

Ecological benefits

- **Wildlife habitat**
- **Open space**
- **Recreational opportunities**

Economic opportunities

- **Alternative farm income**

Nutrient Farming (Summary)

Viable approach would:

- **Establish several pilot projects throughout the basin**
- **Vary in size, scale, and landscape position**

Conclusion

Nitrogen farming would restore land to wetlands and then rely on the natural functions of wetlands to reduce nitrates far more economically than conventional treatment methods. Further, nitrogen farms would prosper where conventional farms falter—on flood prone bottomlands.

Restored wetlands will have a greater economic value when the USEPA establishes nutrient standards and the states adopt related regulations.

Other opportunities

Industry-Led Solutions

Green Lands, Blue Water

"Life is what happens while you're busy making other plans." John Lennon

ca. 1980

The River

Changes in land use and land use practices have degraded water quality and increased sediment and nutrient problems in the river and the Gulf of Mexico

Plans We Can Make

Create opportunities for improved communication among the public to share information.

Communicate recommendations for action clearly to the public – encourage leadership and public support

The Opportunity Spectrum

1. Be advocates for the Gulf ecosystem and seek citizen, agency and congressional support for programs that will restore and maintain the ecological health of the Gulf
2. Look for opportunities to make better use of electronic and print media, using some well-developed themes which reach both urban and rural audiences.
3. Understand the issues
4. Develop information
5. Provide information to the public, other organizations, resource managers and agencies

Opportunities

identify funding not dependent upon federal appropriations process


Other Opportunities?